



## Assessing heat-adaptive behaviors among older, urban-dwelling adults

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### Abstract:

**OBJECTIVES:** Health studies have shown that the elderly are at a greater risk to extreme heat. The frequency and intensity of summer heat waves will continue to increase as a result of climate change. It is important that we understand the environmental and structural factors that increase heat vulnerability, as well as examine the behaviors used by the elderly to adapt to hot indoor temperatures. **STUDY DESIGN:** From June 1 to August 31, 2009, residents in 29 homes in Detroit, MI, kept an hourly log of eight heat-adaptive behaviors: opening windows/doors, turning fans or the air conditioner on, changing clothes, taking a shower, going to the basement, the porch/yard, or leaving the house. Percentages of hourly behavior were calculated, overall and stratified by housing type and percent surface imperviousness. The frequency of behavior use, as a result of indoor and outdoor predetermined temperature intervals was compared to a reference temperature range of 21.1-23.8 degrees C. **RESULTS:** The use of all adaptive behaviors, except going to the porch or yard, was significantly associated with indoor temperature. Non-mechanical adaptations such as changing clothes, taking showers, and going outside or to the basement were rarely used. Residents living in high-rises and highly impervious areas reported a higher use of adaptive behaviors. The odds of leaving the house significantly increased as outdoor temperature increased. **CONCLUSIONS:** These findings suggest that the full range of heat adaptation measures may be underused by the elderly and public health interventions need to focus on outreach to these populations.

**Source:** <http://dx.doi.org/10.1016/j.maturitas.2011.06.015>

### Resource Description

#### Exposure :

weather or climate related pathway by which climate change affects health

Temperature

**Temperature:** Extreme Heat

#### Geographic Feature:

resource focuses on specific type of geography

Urban

#### Geographic Location:

resource focuses on specific location

# Climate Change and Human Health Literature Portal

United States

## **Health Impact:**

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified

## **Mitigation/Adaptation:**

mitigation or adaptation strategy is a focus of resource

Adaptation

**Population of Concern:** A focus of content

## **Population of Concern:**

populations at particular risk or vulnerability to climate change impacts

Elderly

## **Resource Type:**

format or standard characteristic of resource

Research Article

## **Timescale:**

time period studied

Time Scale Unspecified

## **Vulnerability/Impact Assessment:**

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content